

What Is Claimed Is:

1. A method for analyzing the transcriptome of a cellular sample comprising
analyzing two or more molecular species present in a 2-dimensional array
of said cellular sample, wherein said method comprises treating said 2-
dimensional array with an External Movement Inhibitor device having
multiple discrete partitions, so as to sequester molecules present in said
array into one or more discrete regions, wherein said treatment preserves
the positional relationship of the molecules of said 2-dimensional array, and
permits a determination of the location(s) in said cellular sample in which
said molecular species are present.
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2. The method of claim 1, wherein said cellular sample is a cellular sample
obtained from a mammal.
3. The method of claim 2, wherein said mammal is a human.
4. The method of claim 1, wherein said cellular sample is a tissue sample.
- 15 5. The method of claim 4, wherein said tissue sample is a biopsy.
6. The method of claim 1, wherein said molecular species are nucleic acid
molecules.
7. The method of claim 6, wherein said method additionally comprises
incubating the sequestered nucleic acid molecules of two or more regions
under conditions sufficient to permit the manipulation of one or more
preselected nucleic acid molecules if present at said regions, while
preserving the positional relationship of said molecules relative to other
molecules of said 2-dimensional array.
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8. The method of claim 7, wherein said method additionally comprises
transferring said manipulated nucleic acid species to two or more
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membranes, said membranes being differentially treated to enable the determination of the location(s) of manipulated nucleic acid species.

9. The method of claim 7, wherein one or more of said preselected nucleic acid molecule(s) are diagnostic of a disease state.
- 5 10. The method of claim 7, wherein said manipulation is selected from the group consisting of nucleic acid amplification, reverse transcription, labeling, cloning, and the assaying of a biomolecule.
- 10 11. The method of claim 7, wherein said method comprises incubating the sequestered nucleic acid molecules of all of said regions under conditions sufficient to permit the manipulation of said one or more preselected nucleic acid molecules.
12. The method of claim 11, wherein one or more of said preselected nucleic acid molecule(s) are diagnostic of a disease state.
- 15 13. The method of claim 11, wherein said manipulation is selected from the group consisting of nucleic acid amplification, reverse transcription, labeling, cloning, and the assaying of a biomolecule.
14. The method of claim 6, wherein said cellular sample is an extract of a cell, and said 2-dimensional array is a gel or membrane that arrays said nucleic acid molecules.
- 20 15. The method of claim 14, wherein said method additionally comprises incubating the sequestered nucleic acid molecules of two or more regions under conditions sufficient to permit the manipulation of one or more preselected nucleic acid molecules if present at said regions, while preserving the positional relationship of said molecules relative to other molecules of said 2-dimensional array.
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16. The method of claim 15, wherein one or more of said preselected nucleic acid molecule(s) are diagnostic of a disease state.
17. The method of claim 15, wherein said manipulation is selected from the group consisting of nucleic acid amplification, reverse transcription, labeling, cloning, and the assaying of a biomolecule.
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18. The method of claim 15, wherein said method additionally comprises transferring said manipulated nucleic acid species to two or more membranes, said membranes being differentially treated to enable the determination of the location(s) of manipulated nucleic acid species.
- 10 19. The method of claim 15, wherein said method comprises incubating the sequestered nucleic acid molecules of all of said regions under conditions sufficient to permit the manipulation of said one or more preselected nucleic acid molecules.
- 15 20. The method of claim 19, wherein one or more of said preselected nucleic acid molecule(s) are diagnostic of a disease state.
21. The method of claim 19, wherein said manipulation is selected from the group consisting of nucleic acid amplification, reverse transcription, labeling, cloning, and the assaying of a biomolecule.
22. The method of claim 1, wherein said molecular species are protein molecules.
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23. The method of claim 22, wherein said cellular sample is an extract of a cell, and said 2-dimensional array is a gel or membrane that arrays said molecules of said extract.
24. The method of claim 22, wherein one or more of said protein molecule(s) are diagnostic of a disease state.
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